



Third Fork Creek

Stream Restoration Project



**PUBLIC WORKS DEPARTMENT
STORMWATER & GIS SERVICES DIVISION**
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John Hutton - Wildlands Engineering





Agenda

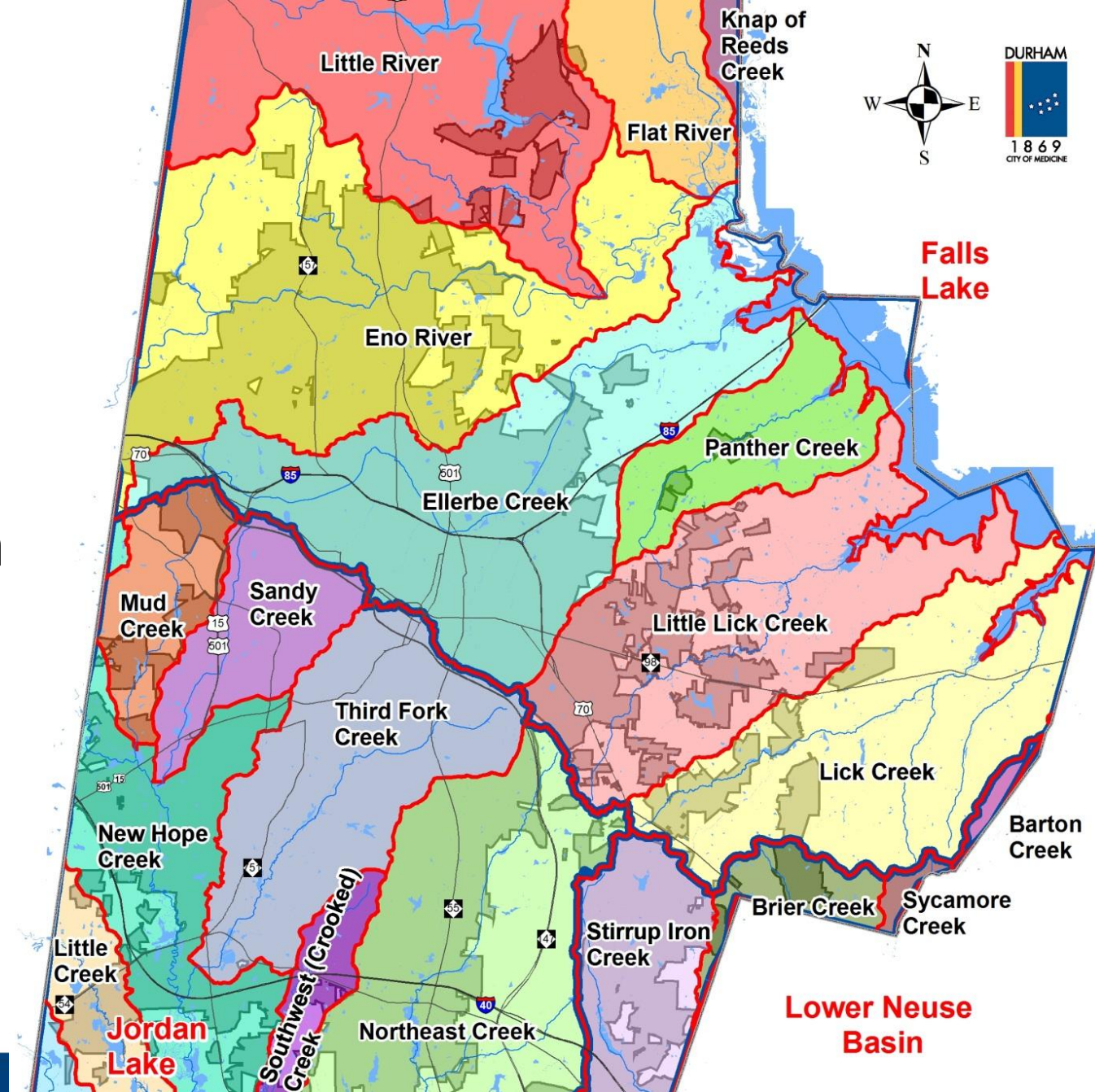
- **Introductions of City Staff and Project Team**
- **Brief Presentation**
 - Durham Watersheds
 - Current Problems
 - What is Stream Restoration
 - Solutions
- **Question & Answer Session**

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City of Durham Watersheds





Basic Elements of Watershed Improvement Plans



Public Outreach



Field Assessments



Water Quality Modeling



Evaluation of Measures

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Stormwater & GIS Services Division*

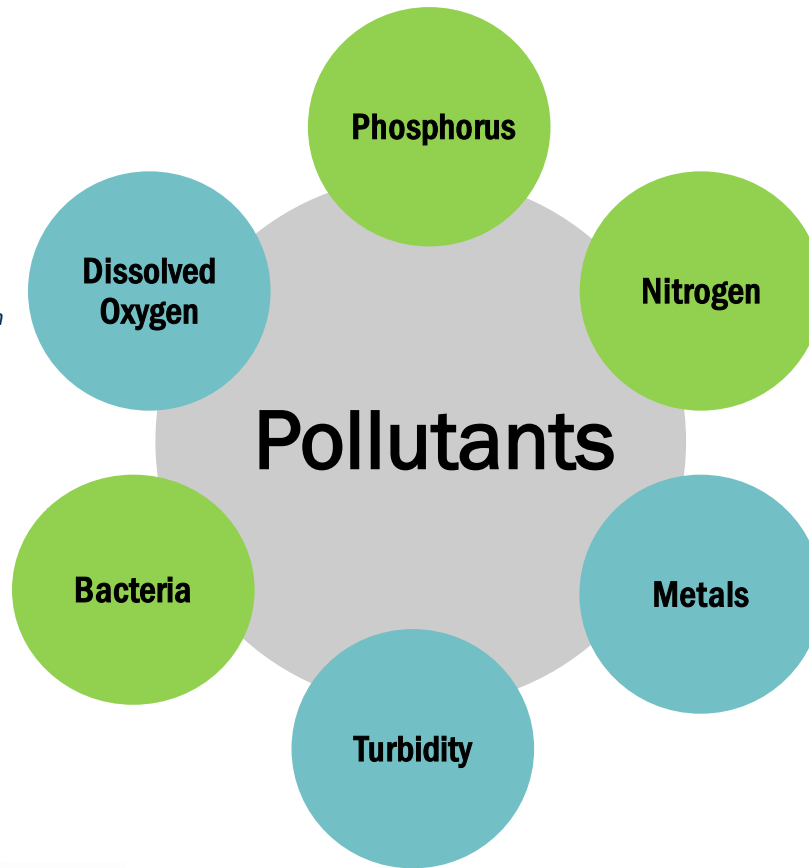
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Why Watershed Improvement Plans?



- ✓ Identify water quality projects that help the City comply with the federal and state regulations for stormwater management
- ✓ Improve the health and condition of streams within watersheds
- ✓ Identify the most cost-effective and beneficial watershed improvement projects

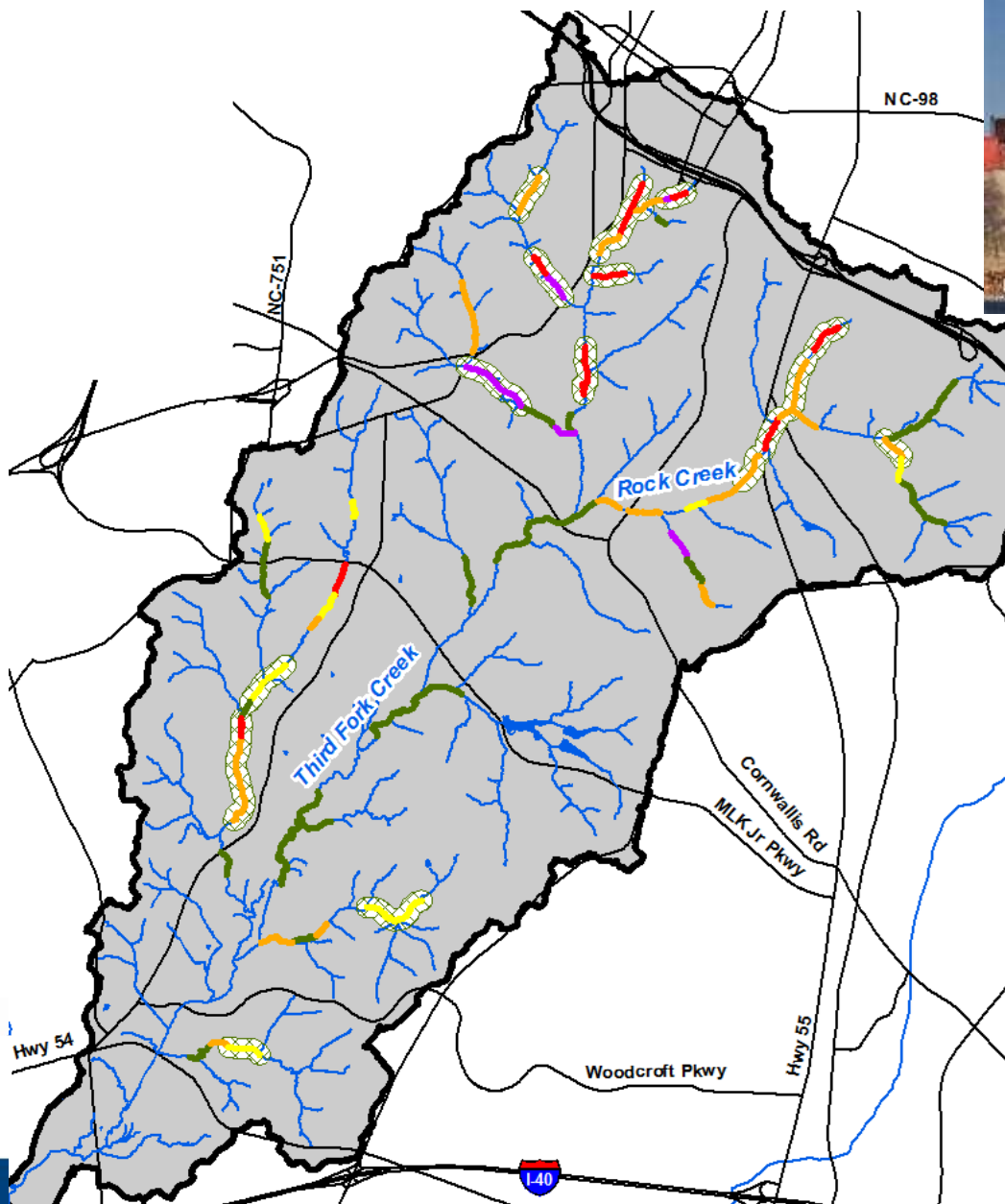
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Third Fork Creek



**>13 Miles of Stream
Evaluated in Fall 2009**

**113 SCM Opportunities
Evaluated in Winter 2010**

Legend

- Creek/Stream
- Major Road
- Third Fork Creek Basin
- Restoration Potential**
- Restoration
- Enhancement 1
- Enhancement 2
- Stabilization
- Preservation
- Buffer Restoration

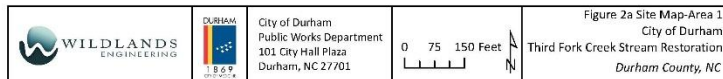




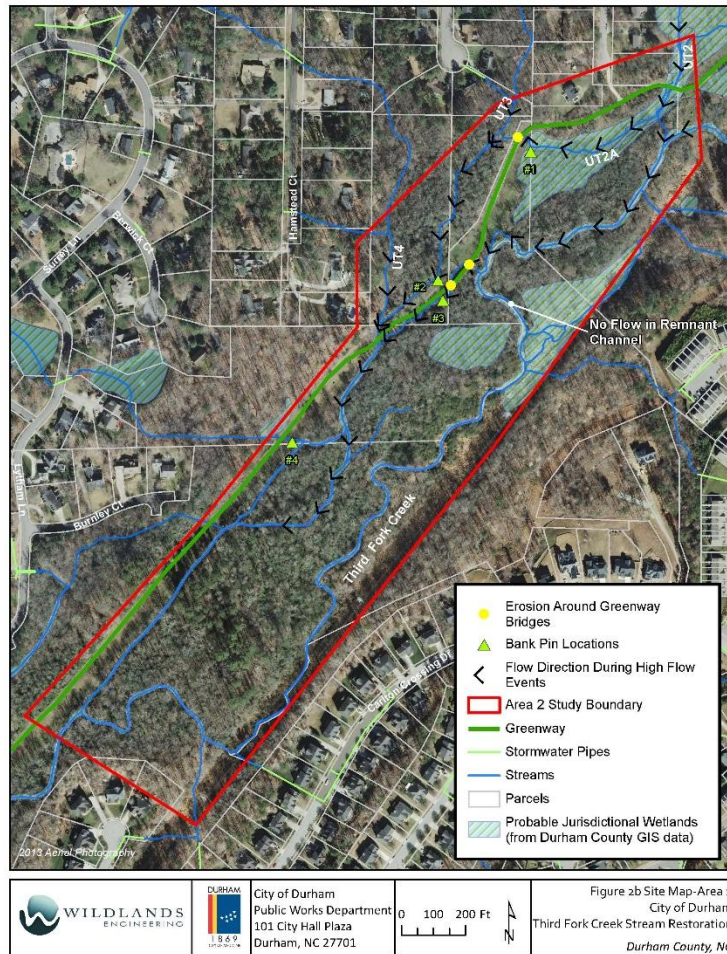
What Problem Are We Trying To Solve?



Third Fork Creek Trail - MLK Parkway (Area 1)



Third Fork Creek Trail - Courtland Drive (Area 2)





What is Stream Restoration?



Stream Restoration

- Repair of streams damaged by erosion, urban development, or agricultural practices.
- Goals include: cleaner water, stable stream banks, improve habitat for fish and wildlife.
- Use stable streams as a blueprint for the restored stream.



What Do Unstable Streams Look Like?



What Do Restored Streams Look Like?

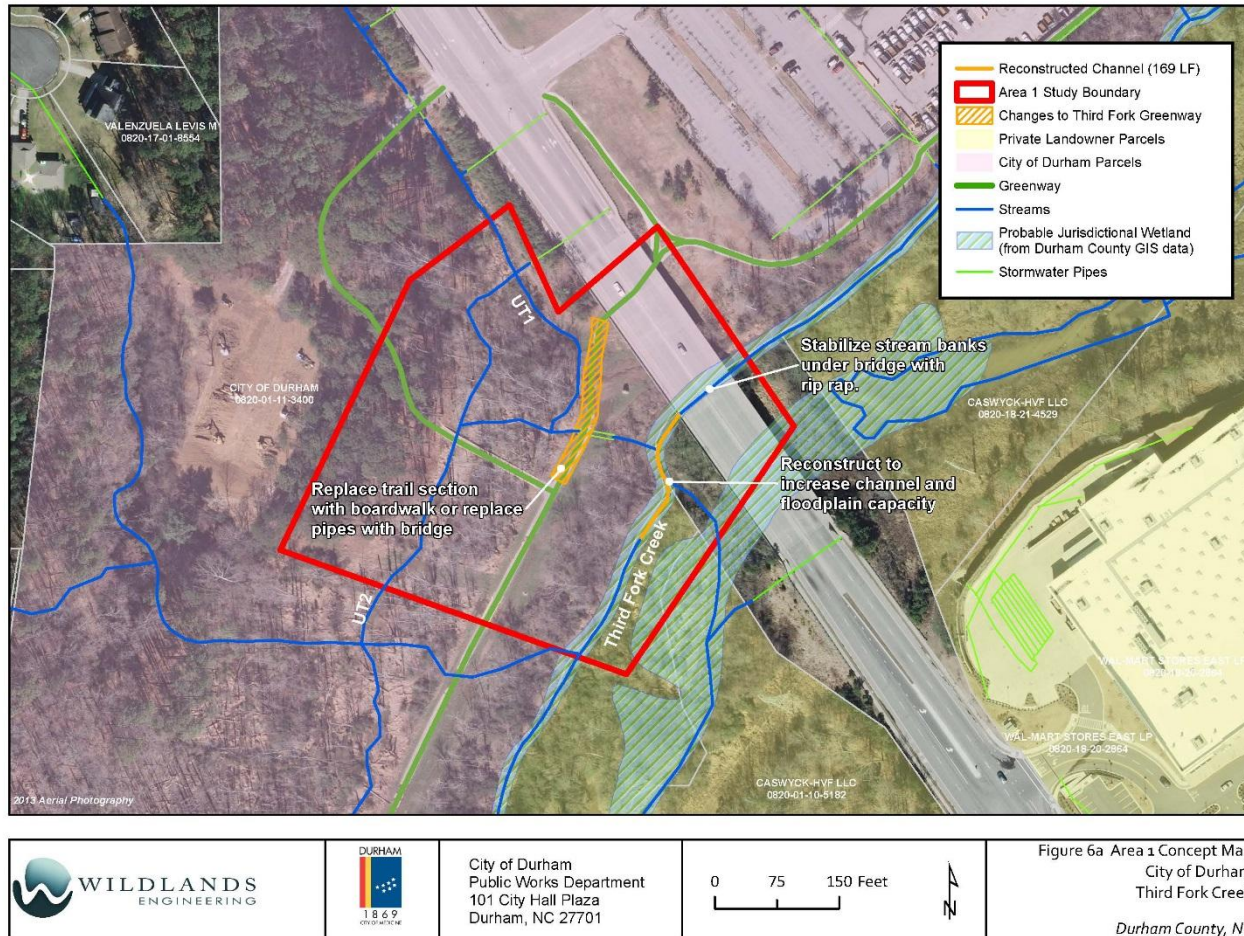




How Do We Solve The Problems?



Third Fork Creek Trail - MLK Pkwy (Area 1)

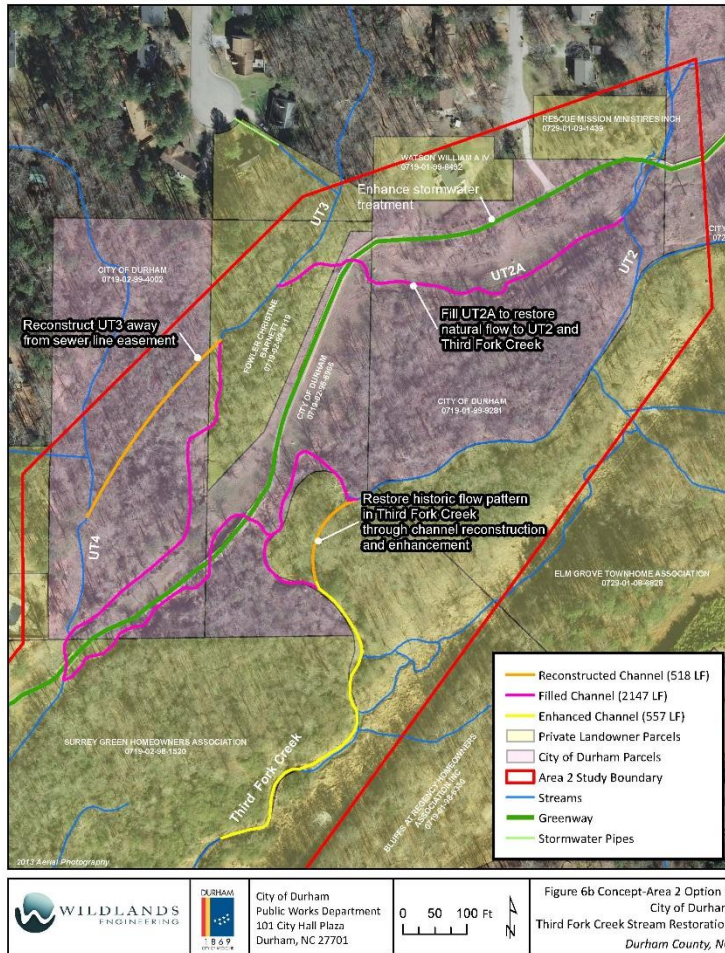


Third Fork Creek Trail - MLK Pkwy (Area 1)



- Stabilize stream banks under MLK bridge.
- Reconstruct ~ 100 feet of Third Fork Creek to pass more flow during frequent, moderate flood events.
- Replace paved trail with boardwalk from MLK bridge to spur trail.
- Remove clogged culverts.

Third Fork Creek Trail - Courtland Drive (Area 2)



- Separate streams from trail and sewer lines to help restore water quality and eliminate infrastructure problems.
- Eliminate side channel (UT2A) to return natural flow path to tributary stream (UT2).
- Restore Third Fork Creek natural flow path to currently abandoned channel.

Third Fork Creek Trail - Courtland Drive (Area 2)



Third Fork Creek Trail - Courtland Drive (Area 2)



Questions?





Thank you for coming!

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